AMENDMENTS TO THE SPECIFICATION

IN THE SPECIFICATION

Please insert the following on page 1, line 2:

Field of the Invention

Please insert the following on page 1, line 5:

Description of the Background Art

Please insert the following on page 1, line 17:

Brief Summary of the Invention

Please insert the following paragraph on page 1, line 36:

--Further scope of applicability of the present invention will become apparent from the detailed description given hereinafter. However, it should be understood that the detailed description and specific examples, while indicating preferred embodiments of the invention, are given by way of illustration only, since various changes and modifications within the spirit and scope of the invention will become apparent to those skilled in the art from this detailed description.—

Please insert the following on page 2, line 1:

Brief Description of the Drawings

Please insert the following on page 2, line 28:

Detailed Description of the Invention

Please replace page 3, second paragraph, with the following paragraph:

The body 22 supports the electrical components of the end cap. Figure 2 shows the body supporting motor terminals 50, fingerleaf brushes 52, brush holders 54 and spring connectors 56. The fingerleaf brushes 52 (Figure 7) are strips of a resiliently flexible conductive material such as beryllium copper. The distal end of the brush leaf has been separated into three fingers 58, forming a co-called fingerleaf brush. Each brush 52 is connected, by upset rivets 60, to a brush holder 54 which fixes the brush 52 to the body 22. Motor terminals 50 extend from apertures 62 in the body along grooves 64 to make resilient contact with the brush holders 54. While female motor terminals are shown, male terminals are also possible.

Please replace page 3, third paragraph, with the following paragraph:

The brush holders 54, more clearly shown in Figure 8, have a barb 66 which is pressed into a slot 68 in the body for fixing the brush holder in position and hence, the brushes. The spring connectors 56 make resilient contact with the respective brush holders and extend through ~~apertures 70~~ apertures 62 in the body into opposite ends of

the compartment 40 for the EMI device 36. The spring connectors 56 (Figure 9) are of conductive spring material such as brass and the distal ends are arranged to make resilient electrical contact with the terminals 44 of the EMI device 36 while accommodating variations in size between individual EMI devices due to manufacturing tolerances.

CLAIMS SET AS AMENDED

1. (Currently Amended) An end cap for a miniature electric motor, the end cap having a body of insulating material and a cover of conductive material, wherein the body supports two brushes for making sliding contact with a commutator, two motor terminals for connecting a power supply to the brushes and a chip type ~~EMI~~ electro-magnetic interference device having at least three terminals including: two input terminals, respectively connected to the two motor terminals; and at least one earth terminal electrically connected to the conductive cover.

2. (Currently Amended) The end cap of Claim 1, wherein the chip type ~~EMI~~ electro-magnetic interference device has two earth terminals which are connected to the conductive cover.

3. (Currently Amended) The end cap of Claim 1, wherein the ~~or each~~ at least one earth terminal of the ~~EMI~~ electro-magnetic interference device is connected to the conductive cover by a conductive spring.

4. (Currently Amended) The end cap of Claim 3, wherein the ~~EMI~~ electro-magnetic interference device has two earth terminals and the conductive spring is 'W'-shaped.

5. (Currently Amended) The end cap of Claim 3, wherein the cover has an opening in which the ~~EMI~~ electro-magnetic interference device is located and the conductive spring

engages an edge of the opening to establish electrical contact between the ~~or each~~ at least one earth terminal of the ~~EMI~~ electro-magnetic interference device and the cover.

6. (Currently Amended) The end cap of Claim 3, wherein the device is located in a compartment integrally formed in the body of the end cap and is retained in the compartment by the conductive spring.

7. (Currently Amended) The end cap of Claim 1, wherein the body of the end cap has an integrally formed compartment in which the ~~EMI~~ electro-magnetic interference device is located.

8. (Currently Amended) The end cap of Claim 1, wherein the ~~EMI~~ electro-magnetic interference device is held between a pair of resiliently deformed electrically conductive connectors.

9. (Currently Amended) The end cap of Claim 8, wherein the connectors are spring connectors which make resilient contact with the input terminals of the ~~EMI~~ electro-magnetic interference device.

10. (Original) The end cap of Claim 8, wherein the brushes comprise resiliently flexible conductive strips connected to relatively rigid brush holders and the spring connectors are electrically connected to the motor terminals by way of the brush holders.

11. (Original) The end cap of Claim 10, wherein the brushes each have a free end divided into a plurality of fingers adapted to make sliding contact with the commutator.

12. (Original) The end cap of Claim 10, wherein the brushes include a carbon based body fitted to an end of the strip for making sliding contact with the commutator.

13. (Currently Amended) The end cap of Claim 1, wherein the ~~EMI~~ electro-magnetic interference device is mounted on the body of the end cap and is accessible from an outer surface of the end cap.

REMARKS

Applicant appreciates the Examiner's thorough consideration provided for the present application. Claims 1-13 are now present in the application. Amendments have been made to the specification. Claims 1-9 and 13 have been amended. Claim 1 is independent. Reconsideration of this application, as amended, is respectfully requested.

Drawings

The drawings have been objected to due to the presence of minor informalities. First, reference numeral 62 now appears in the specification.

With regard to the subject matter recited in claim 10, Applicant respectfully submits that FIGs. 2 and 10 show every feature of the invention specified in claim 10. In particular, FIG. 2 shows that the brushes comprise resiliently flexible conductive strips 52 connected to brush holders 54 and the spring connectors 56 are electrically connected to the motor terminals 50 by way of the brush holders 54; FIG. 10 further shows the connection between the brush holder 54 and the spring connector 56.

In light of the foregoing amendments to the specification and remarks, Applicant respectfully submits

that these objections have been obviated and/or rendered moot. Accordingly, reconsideration and withdrawal of the Examiner's drawing objections are respectfully requested.

Allowable Subject Matter

The Examiner has indicated that claims 5, 6, and 9-12 would be allowable if rewritten to overcome the rejections under 35 U.S.C. §112, second paragraph and to include all of the limitations of the base claim and any intervening claims. Applicant greatly appreciates the indication of allowable subject matter by the Examiner.

Claim Rejections Under 35 U.S.C. § 112

Claims 1-13 stand rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as his invention. This rejection is traversed.

A complete discussion of the Examiner's rejection is set forth in the Office Action, and is not being repeated here.

In light of the foregoing amendments to the claims, Applicant respectfully submits that this rejection has been

obviated and/or rendered moot. Without conceding to the propriety of the Examiner's rejection, but merely to timely advance the prosecution of the application, Applicant has incorporated the changes recommended by the Examiner. Applicant submits that the requested changes do not appear to either raise a substantial question of the patentability of the claimed invention nor do they narrow the scope of the claimed invention.

In view of the above amendments and remarks, Applicant respectfully submits that claim 1-13 are definite and clear. Accordingly, reconsideration and withdrawal of the Examiner's rejection under 35 U.S.C. § 112, second paragraph are respectfully requested.

Claim Rejections Under 35 U.S.C. § 103

Claims 1 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sato, US. Patent No. 5,281,876 in view of Mayumi et al., U.S. Patent No. 4,853,576 and Ozaki, JP 407107709A. Claims 2 and 8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sato in view of Mayumi et al., and further in view of Stevenson et al, U.S. Patent No. 5,973,906. Claims 3 and 4 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sato, Mayumi

et al., Ozaki, and further in view of Paukovits, Jr. et al, U.S. Patent No. 4,874,337. Claim 7 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Sato, Mayumi et al., Ozaki, and further in view of Burgess et al, U.S. Patent No. 4,845,393. These rejections are respectfully traversed.

A complete discussion of the Examiner's rejection is set forth in the Office Action, and is not being repeated here.

The present invention is directed to an end cap assembly. Independent claim 1 of the present invention requires a combination of elements including "a chip type electro-magnetic interference device having at least three terminals including: two input terminals, respectively connected to the two motor terminals".

Ozaki discloses that a small DC motor is provided with 3-terminal EMI filter (10) placed on a brush-holder group (7), and that the 3-terminal EMI filter (10) consists of ferrite cores and electrostatic capacitors shown in FIG. 2 of Ozaki. Ozaki in FIG. 2 discloses that two input terminals of the 3-terminal EMI filter (10) are connected to the power supply (+) and the motor terminal (11), respectively (or connected to the power supply (-) and the

motor terminal (20), respectively.) However, Ozaki fails to teach or suggest the 3-terminal EMI filter (10) "having at least three terminals including: two input terminals, respectively connected to the two motor terminals" (*i.e.*, 11 **and** 20 in FIG. 2 of Ozaki) as set forth in claim 1. Ozaki also fails to teach or suggest that the 3-terminal EMI filter (10) is "a chip type electro-magnetic interference device" as set forth in claim 1, because the 3-terminal EMI filter (10) consists of ferrite cores and electrostatic capacitors, rather than a chip type electro-magnetic interference device.

With regard to the Examiner's reliance on Sato, this reference has only been relied on for its teachings of the body of the end cap, two brushes and two motor terminals. Sato fails to disclose the above aspects of the present invention. Accordingly, Sato fails to cure the deficiencies of Ozaki.

With regard to the Examiner's reliance on Mayumi, this reference has only been relied on for its teachings of the body made of insulating material and the cover made of conductive material. Mayumi fails to disclose the above aspects of the present invention. Accordingly, Mayumi fails to make up for the deficiencies of Ozaki.

With regard to the Examiner's reliance on Stevenson, this reference has only been relied on for its teachings of two earth terminals of the electro-magnetic interference device. Stevenson fails to disclose the above aspects of the present invention. Accordingly, Stevenson fails to cure the deficiencies of Ozaki.

With regard to the Examiner's reliance on Paukovits, this reference has only been relied on for its teachings of the spring connectors. Paukovits fails to disclose the above aspects of the present invention. Accordingly, Stevenson fails to make up for the deficiencies of Ozaki.

With regard to the Examiner's reliance on Burgess, this reference has only been relied on for its teachings of the compartment in which the electro-magnetic interference device is located. Burgess fails to disclose the above aspects of the present invention. Accordingly, Burgess fails to cure the deficiencies of Ozaki.

Accordingly, none of those references individually or in combination teach or suggest the limitations of independent claim 1. Therefore, Applicant respectfully submits that independent claim 1 clearly defines over the teachings of the references relied on by the Examiner.

In addition, claims 2-13 depend, either directly or indirectly, from independent claim 1, and are therefore allowable based on their respective dependence from independent claim 1 which is believed to be allowable.

In view of the above amendments and remarks, Applicant respectfully submits that claims 1-13 clearly define the present invention over the references relied on by the Examiner. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103 are respectfully requested.

CONCLUSION

Since the remaining patents cited by the Examiner have not been utilized to reject the claims, but rather to merely show the state-of-the-art, no further comments are necessary with respect thereto.

All the stated grounds of rejection have been properly traversed and/or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently pending rejections and that they be withdrawn.

It is believed that a full and complete response has been made to the Office Action, and that as such, the

Examiner is respectfully requested to send the application to Issue.

In the event there are any matters remaining in this application, the Examiner is invited to contact Joe McKinney Muncy, Registration No. 32,334 at (703) 205-8000 in the Washington, D.C. area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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